

Making the Connection:
How School-Community Partnerships Address
Teenage Pregnancy Prevention
Executive Summary

In 1995, California authorized its Department of Education (CDE) to create adolescent pregnancy prevention programs in counties with the highest teen birth rates (Senate Bill 1170, Chapter 311). The Teenage Pregnancy Prevention Grant Program (TPPGP), a \$50 million, five-year competitive grant program, funded 37 local education agencies and their community partners in 25 counties to support students in elementary and secondary schools in delaying the onset of sexual activity and reducing the incidence of teenage pregnancy. The statute required each TPPGP grantee to provide a summary local evaluation report to CDE to indicate how well each grantee had met its local goals. Although the legislation did not fully fund it, the statute also required CDE to implement a statewide evaluation that measured specified cross-site outcomes, including delayed sexual activity, teen births, self-esteem and resiliency, family communication, and academic indicators. CDE successfully obtained funding from the Stuart Foundation and selected the Institute for Health Policy Studies at the University of California, San Francisco (UCSF) and Philliber Research Associates (PRA) to conduct the evaluation. This report, prepared in response to the legislative mandate, describes the implementation of TPPGP, and presents evaluation findings, conclusions, and recommendations.

In June 2000, the UCSF evaluation team inherited a pre-existing evaluation design¹ with definite strengths and specific limitations. Strengths included a well-documented design, a variety of measures of program effects,² and grantees' annual reports. Limitations followed from two factors: first, CDE did not have adequate resources to design and implement the program and the statewide evaluation at the same time; and second, funding was not provided to engage a single evaluation team to provide on-going quality assurance and outcome assessment. Local programs were already under way when CDE implemented the statewide evaluation. As a result, a strong design that included comparison groups; a single, strong participant survey and centralized data analysis; adequate sample sizes; measures of important mediating factors; and consistent annual data from all grantees was not feasible. In addition, because a statewide evaluation team was not in place, midcourse corrections in the evaluation design could not be made; as a result, some grantees collected data at considerable cost that could not be used. Despite these limitations, the exceptionally diverse types of data that grantees collected yield a multi-faceted picture of the Teenage Pregnancy Prevention Program.

Incidence and effects of teenage pregnancy

In the mid-1990s, California experienced two urgent and concurrent demographic trends—high teen birth rates and a rapidly increasing teenage population. In 1996, TPPGP's first year of operation, California's birth rate for females between the ages of 15 and 19 was 58.6 per 1000 (Department of Health Services, 1996). In addition, analysts projected a 34% increase in the number of teens in California ages 10 through 19 between 1995 and 2005, foreshadowing a

¹ The design was prepared in 1997 by a consultant team composed of SRI International and PRA.

² Multiple data sources included administrative data (*e.g.*, attendance, test scores, student behavior); student and staff surveys; birth records; grantees' annual and summary evaluation reports; and qualitative data collected during site visits to 13 of the 37 agencies.

potential surge in the number of teen births (Clayton, Brindis, Hamor, Raiden-Wright, and Fong, 2000). Teen pregnancies and births have high public costs (estimated to be \$17,000 per year per teen family) as well as personal costs, including reduced lifetime incomes for parents and increased psychosocial and health problems for their children (The Annie E. Casey Foundation, 2000).

TPPGP program design and implementation

The complex and multi-faceted antecedents of teenage pregnancy require multi-dimensional prevention approaches. Hence, SB 1170 required TPPGP programs to target youth living in counties with the highest teenage birth rates and with demonstrated risk factors, including poverty, low basic skills, low academic achievement, a sibling or a parent who was a teenage parent, evidence of multiple risk behaviors (*e.g.* alcohol and drug use combined with sexual activity), and low self-esteem.

CDE reviewed current research sources as a basis for developing the project. The TPPGP Request for Applications (RFA) directed potential grantees to focus on reducing risks and antecedents of teenage pregnancy while enhancing individual protective factors, such as attachment to school and community, connection with adults outside the family, academic success, and high expectations for the future. It required grantees to develop comprehensive programs that included at least one of 16 ‘proven effective’ teenage pregnancy prevention strategy (as SB 1170 required), as well as other program elements that addressed locally identified risk factors and desired results. Comprehensive approaches incorporated community partnerships and parent involvement.

In keeping with TPPGP’s emphasis on local empowerment, grantees selected one or more primary prevention strategies from CDE’s list of 16 strategies with a basis in research. The 37 grantees used diverse, sequential approaches to accomplish program goals, as this summary indicates:

- Of the 37 grantees:
 - 34 (92%) implemented programs in middle schools;
 - 21 (57%) implemented programs in high schools;
 - 18 (49%) implemented programs in elementary schools; and
 - 11 (30%) implemented programs in three school levels, 14 (38%) implemented programs in two levels, and 11 (30%) implemented programs in one level.
- Of the 37 grantees:
 - 34 worked with community partners to implement combinations of primary and additional strategies;
 - 16 implemented *Community of Caring*, a character-education approach, as their primary strategy, in districtwide or schoolwide configurations;
 - 16 incorporated Healthy Start, including individual counseling, as a primary strategy;
 - 21 targeted students in specific grades with youth development or pregnancy prevention curricula (with or without another schoolwide strategy); and

- 25 used more than one primary strategy.
- Overall, 60% of grantees implemented their primary strategies with high fidelity (i.e., consistency) to the chosen model, 33% were somewhat consistent, and 7% substantially modified a primary strategy or created their own intervention.
- Grantees were more likely to implement primary strategies with full fidelity in elementary schools (72%) and were least likely to do so in high schools (45%). In middle schools, 63% of interventions were implemented with high fidelity.
- Grantees implemented a variety of additional strategies, including tutoring, service-learning, case management, group support, after-school art and recreation programs, and an infant simulation.³
- To increase families' support for teen pregnancy prevention and to enhance communication skills, 86% of grantees implemented parent education and involvement strategies.
- Almost 175,000 students from over 400 schools participated in TPPGP each year. Those in schoolwide and districtwide interventions participated for multiple years, and those in interventions that targeted specific grades or students may have participated more than once.

Evaluation findings

NOTE: Only students *whose parents positively consented to their participation in the evaluation in accordance with Education Code Section 51513* completed individual surveys.⁴ Participation in the survey was not a requirement for program participation. Student survey results are included in the findings for evaluation questions one and three below.

1. Were more teens delaying the onset of sexual activity, and were there decreases in the number of teen births in the target populations?

The starting point: Baseline levels of sexual activity

At baseline, fewer teens were sexually active in communities using schoolwide programs than in those that targeted specific grades for their comprehensive programs. Among middle school students who participated in schoolwide TPPGP programs, 15% of males and 7% of females were sexually active at baseline, compared to 39% of males and 38% of females in middle school in targeted programs. Among high school students in schoolwide programs, 35% of males and 28% of females were sexually active, compared to 55% of males and 47% of females in communities that targeted specific grades.

Delayed Onset of Sexual Activity

Students with positive parent consent answered four evaluation questions on sexual intent, beliefs, and behaviors.

- At follow-up, **more middle school** males and females in schoolwide interventions *agreed* with the statement, "Having sex is not a good choice for people my age." Fewer middle school males were sexually active (12% compared to 15% at baseline). Both of these changes were statistically

³ Eighteen grantees implemented *Baby Think It Over™*, a computerized doll meant to simulate infant care-taking.

⁴ The requirement for positive parental consent had an unintended consequence: response rates for the survey samples ranged from 10% to 100%, indicating biased samples.

significant. Other survey results for middle school youth were in the desired direction but were not statistically significant.

- At follow-up, *fewer high school* students in schoolwide interventions *agreed* with the statement “Having sex is not a good choice for people my age” (statistically significant). Other survey results for high school youth were in the desired direction but were not statistically significant.
- Survey results for middle and high school students in targeted programs were not consistent and not statistically significant, probably due to the short time period between pretest and posttest.

*Birth Rates*⁵

Changes in birth rates (births per 1,000 females 12 to 17 years of age) in the 99 TPPGP zip codes were compared to those in similar areas *without* teen pregnancy prevention interventions (the comparison group) and to the state as a whole. Birth rates in both TPPGP and comparison areas exceeded the state average in 1995.

- Between 1995 and 2000, California’s teen birth rate for girls between 12 and 17 years of age declined by 34%.
- During the same period, birth rates declined in 34 of 37 TPPGP communities. Rates declined *more* than the state average in 43% of TPPGP service areas (n=16), declined *less* than the state average in 49% (n=18) of TPPGP communities, and *increased* in 8% (n=3).
- Average birth rates also declined more rapidly in TPPGP zip codes than in comparison zip codes in three of the five years the program was in operation.

Changes in birth rates in 34 TPPGP zip codes with significantly higher birth rates in 1996 were compared to changes in similar high-risk communities with no pregnancy prevention programs.

- Birth rates declined more rapidly in TPPGP zip codes with very high birth rates between 1996 and 2000 than in the high-risk comparison zip codes.

Further analyses identified characteristics of TPPGP programs that were more successful than average in reducing teen birth rates.⁶

- TPPGP programs that were more successful in reducing teen birth rates were significantly more likely to have:
 - Implemented targeted (rather than schoolwide) programs;
 - Served smaller (rather than larger) proportions of students;
 - Used primary strategies with stronger evaluation results;
 - Implemented their primary strategy with greater fidelity to the published curriculum; and
 - Focused their resources in areas with above average birth rates.
- Although suggested as a possible explanation for differences in program success, one community characteristic, the percentage of Latinos in the TPPGP service area, had no significant effect on the

⁵ A comprehensive review of over 400 adolescent pregnancy prevention program evaluations identified fewer than 10 that used teen birth rates as an outcome indicator (Kirby, 2001). This is due, in part, to the fact that teen births, especially for the youngest teens, fluctuate from year to year, and in part, because many factors outside program control influence even zip code level birth rates. The use of birth rates as an outcome indicator sets a very high standard.

⁶ These analyses used statistical techniques to minimize the effects of random fluctuations typical in teen birth rates.

degree to which teen birth rates declined in TPPGP communities.⁷ Programs that successfully reduced birth rates were similarly effective with all populations.

- Several TPPGP features with positive results in other evaluations—implementation in two or more grade spans, the use of multiple additional strategies, and community service as an additional strategy—did not have the expected effect. In this program, none of these three program features contributed to grantees’ success in reducing teen births.
- Over half of TPPGP grantees used a comprehensive integrated service model as a primary strategy, and more than half used an added strategy, the infant simulation, but neither of these strategies was statistically related to the degree of success in reducing teen birth rates in this program.

2. Did student educational results (attendance, academic performance, student behavior, and school safety) improve?

TPPGP was one of many school change efforts implemented during this period that sought to improve academic outcomes. While changes occurred in TPPGP schools, they cannot be attributed solely to TPPGP. Further, most grantees that targeted specific grades did not emphasize academic improvement as a program goal but still submitted data that were included in the analyses.

- Among grantees that submitted data, trends were positive on most measures, including attendance (in elementary schools, statistically significant), test scores (math at all three levels and in reading at elementary level, statistically significant), disciplinary actions (not statistically significant), and school safety measures (weapons possession, substance use, and property crimes decreased in six communities with complete data).

3. Did protective factors among students⁸ (self-esteem/resiliency and family functioning/communication) increase?

At posttest, students in targeted programs, but not those in schoolwide programs, showed higher levels of self-esteem/resilience and much higher levels of parent/child communication about issues related to relationships and sexuality. The changes were statistically significant.

4. How have school staff members, administrators, parents/families, students, and community partners been involved?

- During 2000-2001, parents from 16 grantees contributed 83,000 hours to TPPGP activities and community partners contributed 43,000 hours.
- In the 2000-01 survey of 3,500 teachers and other school staff from 26 grantees, 57% said that, as a result of TPPGP, they felt better informed about how schools could be involved in teenage pregnancy prevention, and 29% reported providing TPPGP services to groups or individuals.

5. What was the degree of change observed in systems that support learning, and how have these changes affected program implementation and results?

⁷ Communities with high proportions of Latinos are more likely to have above average teen birth rates for two reasons. First, Latinos account for nearly half of the teen population in California schools, and second, the teen birth rate for Latinos is nearly twice the total state birth rate (97.0 per 1,000 females 15 to 19 years of age, compared to 53.2 per 1,000 in 1998, Clayton, et al., 2000). In the 37 TPPGP school districts, the percentage of Latinos ranged between 7% and 98%. Other population groups are either too small or have birth rates that are too low to affect zip code level birth rates.

⁸ Students with positive parental consent completed surveys on self-esteem and family communication.

Findings from site visits to 13 of the 37 programs showed that few grantees were familiar with the concept of Learning Support Systems⁹ (LSS). Furthermore, incorporating LSS was not an identified program goal. Despite these limitations, many grantees reported that TPPGP interventions did help schools enhance LSS. Eight of 13 (62%) attributed medium to high levels of change in learning support to TPPGP. With respect to program outcomes, 92% of the 13 grantees reported medium to high levels of improvement in protective factors and educational outcomes, and 62% reported reduced sexual risk behaviors. Although these positive results appeared to be independent of levels of change in learning support systems, grantees demonstrated that there is room in the school day to attend both to personal development and to academic development. They also demonstrated that attention to both is associated with reduced risk behaviors.

Barriers and Challenges to TPPGP Implementation

Grantees reported four challenges to program implementation due to policy and regulation.

- *Local* requirements for positive parental consent for participation in family life education and *statewide* requirements for positive consent to complete evaluation surveys (EC§ 51513) made program implementation more difficult.
- The mandate to involve parents was difficult to implement in some communities.
- Some teachers were not comfortable with the requirement to provide scientifically correct and complete information in sexuality education [EC§ 51553(b)(1)(A)].
- The TPPGP sunset provision (EC§ 8922) undermined continuity and staff commitment.

Participant and Provider Satisfaction

Grantees described results from satisfaction surveys and focus groups they conducted with participants and parents. Most results were from small groups of 12 to 15 representative individuals. The results indicate strong support for TPPGP.

- Students reported better relationships with their teachers and classmates, and more regularity in completing their homework, after participating in TPPGP. They also said that, after participating in TPPGP, they were more likely to delay having sex, to postpone having children until they finished school, and to know how to achieve their career goals.
- Parents reported that their children were more responsive and respectful at home and that they were studying harder. Parents valued bilingual staff who facilitated home-school communication.
- Barriers to parent participation included time constraints, language differences, lack of transportation and childcare, perceived lack of school support for parent involvement, competing family responsibilities, and personal problems, including alcohol and substance use.
- Providers, including teachers and community partners, believed that TPPGP helped teens understand why they should delay having sex and children, motivated them to do so, and helped them focus on appropriate developmental tasks.

⁹ Ten components of learning support systems include high classroom standards and expectations, positive youth development, respect for diversity and individual differences, transitions between school levels, safety, health, personalized assistance, school-staff collaboration, school-community collaboration, and family-school partnerships.

Conclusions

The cumulative effect of the evidence from this evaluation supports the strengths of TPPGP's multi-faceted program design, even though each set of findings, except the birth rate analyses, draws on evidence from a small number of TPPGP programs. The cumulative evidence indicates that TPPGP contributed to larger than expected decreases in teen births, encouraged more teens to delay sexual activity, and helped teens in targeted programs to talk more frequently with their parents about issues related to sexuality. This evaluation found that schools had sufficient time in their schedules both to address academic outcomes and to provide social and emotional supports through enhanced Learning Supports Systems.

Teenage pregnancy is a barrier to academic success; therefore, schools have a responsibility to work with students, families, and community partners to help remove this barrier. Schools also have ready access to the majority of students at risk of teen pregnancy.

- Larger proportions of middle school and high school students in communities that implemented targeted programs were sexually active at baseline than were students in communities that implemented schoolwide programs. Even though the percentage of sexually active students was lower in communities that implemented schoolwide programs, over 10% of 5000 *middle school* students in these communities who completed surveys reported being sexually active at baseline. While clearly there is a need to target students who are at highest risk of an unintended pregnancy, all students benefit from education aimed at improving their decision-making skills and health behaviors.
- TPPGP grantees in communities with the largest reductions in teen birth rates shared several characteristics. Most importantly, birth rates declined more rapidly in communities with TPPGP funding than in similar, but non-participating, communities. In addition, while birth rates declined throughout the state during this period, birth rates in zip codes with *significantly higher* birth rates in 1996 declined even more rapidly with TPPGP funding than in similar zip codes without pregnancy prevention programs.
- Participation in TPPGP may have delayed initiation of sexual activity among middle school students who participated in schoolwide programs; small changes mirrored state and national trends.
- Grantees that were most successful in reducing teen birth rates used the most rigorously evaluated primary strategies, followed the published strategies most closely, and focused on students at key developmental stages and at highest risk for pregnancy (targeted programs).
- After participating in targeted TPPGP interventions, students reported higher self-esteem and talked significantly more with their parents about issues related to sexuality. Students in youth development programs without a pregnancy prevention component did neither.
- Through TPPGP, families, schools, and community partners collaborated to enhance adolescents' emotional, social, vocational, and civic competencies, as well as their academic achievement, using comprehensive approaches to teenage pregnancy prevention.

Recommendations

Continued funding for school-based teen pregnancy prevention is essential if California is to avoid higher teen birth rates, with attendant personal and public costs, as the population of students in childbearing years increases. The Legislature may consider continued funding of the first set of grantees, or funding a new group of grantees in communities with above average teen birth rates. In either case, an increased emphasis on designing sustainable programs can help to ensure that scarce resources are directed to additional high need communities in subsequent years.

Future school-based prevention programs that include characteristics of the strongest TPPGP interventions are likely to be most effective in delaying sexual activity and reducing teen pregnancies. The strongest TPPGP interventions:

1. Combine age-appropriate, well-researched, and comprehensive family life education with youth development strategies;
2. Introduce pregnancy prevention education, including decision-making and youth development, *before* students become sexually active;
3. Target communities with the highest teen birth rates;
4. Ensure fidelity to the published, rigorously evaluated curriculum;
5. Increase teachers' expertise in family life education through appropriate staff development;
6. Help parents understand and address the complex issues related to adolescent development;
7. Institutionalize pregnancy prevention education in district-adopted health curricula; and
8. Support local leadership and family-school-community collaboration.

These additional characteristics will further strengthen school-based pregnancy prevention programs:

9. A statewide evaluation design, implemented at the same time that programs begin, to include both on-going, funded, quality improvement and outcomes assessment;
10. Regular contract reviews to ensure compliance with evaluation and program requirements;
11. An explicit focus on enhancing learning support systems;
12. Reproductive health referrals for sexually active teens; and
13. Bilingual staff to fully involve parents.

California should expand and strengthen the model partnership, pioneered by TPPGP, among families, communities, and schools to support adolescent pregnancy prevention.

References

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